A DEVICE FOR SUPPLYING GLAZE IN ROTARY MACHINES FOR DECORATION OF CERAMIC TILES.

BACKGROUND of the INVENTION.

Specifically, though not exclusively, the invention is usefully applied in rotary machines of the type in which a matrix-bearing cylinder, mobile in rotation about an axis thereof, operates on a mobile rest plane on which tiles are translated in a predetermined direction, with at least one doctor predisposed to operate in contact with the external surface of the cylinder. In the present embodiment the matrix-bearing cylinder is provided with at least one elastically-deformable peripheral part limited by a smooth external cylindrical surface made of an elastomer material on which a shape is recessed, constituting the matrix.

In these machines, the supply of glaze is normally directed into a chamber delimited between the doctor and the portion of external cylindrical surface facing the doctor at the contact line there-between.

An important problem exhibited by this type of rotary machine concerns making sure that the supply of fresh glaze is continuous and uniform along the whole length of the doctor.

The main aim of the present invention is to provide a simple and effective solution to this problem.

An advantage of the invention is that it uses the same motor which commands the alternating oscillation motion of the doctor.

These aims and advantages and more besides are all attained by the invention as it is characterized in the appended claims.

SUMMARY of the INVENTION.

On a mobile rest plane, the following operate: a matrix-bearing cylinder, rotatable about an axis thereof, and at least a doctor predisposed to operate contactingly with an external surface of the matrix-bearing cylinder. A supply of glaze is directed into a chamber delimited between the doctor and a portion of external cylindrical surface of the cylinder facing the doctor, at a position in which the doctor and the surface are in contact, via a flexible conduit terminating at a discharge end thereof which is positioned superiorly of the chamber and which is commanded to perform an alternating motion. The flexible conduit is supported by an articulated chain which is commanded to slide axially in two directions along a guide.

BRIEF DESCRIPTION of the DRAWINGS.

Further characteristics and advantages of the present invention will better emerge from the detailed description that follows, of a preferred but non-limiting example of the invention, in a preferred but non-exclusive embodiment thereof, illustrated by way of example in the accompanying figures of the drawings, in which:

figure 1 is a schematic front view in vertical elevation;

figure 2 is a schematic lateral view from the left of figure 1.

DESCRIPTION of the PREFERRED EMBODIMENTS.

With reference to the figures of the drawings, 1 schematically denotes a vertically-developing frame of a rotary machine for decoration of ceramic tiles, of a type in which tiles are translated in a predetermined direction on a mobile rest plane 16, on which a matrix-bearing cylinder 3 operates, which cylinder 3 is rotatingly mobile about an axis thereof, with at least one doctor being predisposed to operate contactingly on the external surface of the matrix-bearing cylinder 3. The cylinder 3 is provided with at least one

elastically-deformable peripheral part delimited by a smooth external cylindrical surface, made of an elastomer material and on which a shape has been cut, or recessed; this is the matrix.

A slide 4 slides in a vertical direction on the frame 1, on which slide 4 a doctor 5 is supported, together with organs which support the doctor 5 and which command any operational motion of the doctor (5) (oscillating motion).

A guide 20 is solidly constrained on the slide 4, parallel to the doctor 5, which guide 20 extends for at least the entire length of the doctor 5 and which guide 20 is located above the part of doctor 5 which comes into contact with the external cylindrical surface of the matrix-bearing cylinder 3.

A flexible element is slidably coupled along the guide 20, which flexible element supports at least one flexible conduit 22 for supply of glaze.

The flexible element 22 ends at a discharge end 23 of the glaze which remains positioned above the chamber 24 which is delimited and comprised between the doctor 5 and the portion of external cylindrical surface of the matrix-bearing cylinder 3 facing the doctor 5 at the relative contact zone thereof.

The flexible element 22 is partially wound about and solidly coupled in rotation on a drive wheel 25 activated to rotate in two directions. In particular, the flexible element is constituted by an articulated chain 21 predisposed to mesh with a cogging provided on the periphery of the drive wheel 25. The drive wheel is driven, via a belt transmission, not shown in the figures of the drawings, by a step motor which is supported, together with the doctor 5, on the slide 4. The step motor also produces the oscillating motion of the doctor 5.

The alternating rotating motion of the drive wheel 25 is transformed into the

alternating straight motion of the chain 21 and consequently of the discharge end 23 of the glaze in the flexible conduit 22.

There is thus a continuous supply of fresh glaze, uniform along the whole length of the doctor 5. This is a considerable improvement on the prior art in terms of remixing of glaze and making the glaze uniform along the whole length of the matrix and the underlying tile to be decorated.